

Claims

What is claimed is:

[c 1] A well fluid comprising:

water; and

a salt, the salt comprising at least one formate salt, wherein a weight-to-volume ratio of the salt in the well fluid is within a range of greater than 120% to about 400%.

[c 2] The well fluid of claim 1, wherein the at least one formate salt comprises cesium formate or a mixture of potassium formate and cesium formate.

[c 3] The well fluid of claim 2, further comprising a halide salt.

[c 4] The well fluid of claim 2, further comprising sodium bromide.

[c 5] The well fluid of claim 1, wherein the at least one formate salt comprises potassium formate.

[c 6] The well fluid of claim 5, further comprising a halide salt.

[c 7] The well fluid of claim 5, further comprising sodium bromide.

[c 8] The well fluid of claim 1, wherein the at least one formate salt comprises cesium formate.

[c 9] The well fluid of claim 1, wherein the weight-to-volume ratio of the total salt content is within a range of about 150% to 350%.

[c 10] The well fluid of claim 1, wherein the weight-to-volume ratio of the total salt content is within a range of about 180% to 300%.

[c 11] A well fluid comprising:

water;

a viscosifying agent; and

a salt, the salt comprising at least one formate salt, wherein a weight-to-volume ratio of the salt content in the well fluid is within the range of greater than 120% to about 400%.

[c 12] The well fluid of claim 11, wherein the at least one formate salt comprises cesium formate or a mixture of potassium formate and cesium formate.

[c 13] The well fluid of claim 12, further comprising a halide salt.

[c 14] The well fluid of claim 12, further comprising sodium bromide.

[c 15] The well fluid of claim 11, wherein the at least one formate salt comprises potassium formate.

[c 16] The well fluid of claim 15, further comprising a halide salt.

[c 17] The well fluid of claim 15, further comprising sodium bromide.

[c 18] The well fluid of claim 11, wherein the at least one formate salt comprises cesium formate.

[c 19] The well fluid of claim 11, wherein the weight-to-volume ratio of the total salt content is within a range of about 150% to 350%.

[c 20] The well fluid of claim 11, wherein the weight-to-volume ratio of the total salt content is within a range of about 180% to 300%.

[c 21] A method of treating a well comprising:

injecting a well treating fluid into the well, wherein the well treating fluid comprises water and a salt, the salt comprising at least one formate salt,

wherein the salt content in the well fluid is within the range of at least 120% to about 400%.

[c 22] The method of claim 21, wherein the at least one formate salt comprises cesium formate or a mixture of potassium formate and cesium formate.

[c 23] The method of claim 22, further comprising a halide salt.

[c 24] The method of claim 22, further comprising sodium bromide.

[c 25] The method of claim 21, wherein the at least one formate salt comprises potassium formate.

[c 26] The method of claim 25, further comprising a halide salt.

[c 27] The method of claim 25, further comprising sodium bromide.

[c 28] The method of claim 21, wherein the at least one formate salt comprises cesium formate.

[c 29] The method of claim 21, wherein the weight-to-volume ratio of the total salt content is within a range of about 150% to 350%.

[c 30] The method of claim 21, wherein the weight-to-volume ratio of the total salt content is within a range of about 180% to 300%.

[c 31] A method of treating a well comprising:

injecting a well treating fluid into the well, wherein the well treating fluid comprises water, a viscosifying agent, and a salt, the salt comprising at least one formate salt, wherein the salt content in the well fluid is within the range of at least 120% to about 400%.

[c 32] The method of claim 31, wherein the at least one formate salt comprises cesium formate or a mixture of potassium formate and cesium formate.

[c 33] The method of claim 32, further comprising a halide salt.

[c 34] The method of claim 32, further comprising sodium bromide.

[c 35] The method of claim 31, wherein the at least one formate salt comprises potassium formate.

[c 36] The method of claim 35, further comprising a halide salt.

[c 37] The method of claim 35, further comprising sodium bromide.

[c 38] The method of claim 31, wherein the at least one formate salt comprises cesium formate.

[c 39] The method of claim 31, wherein the weight-to-volume ratio of the total salt content is within a range of about 150% to 350%.

[c 40] The method of claim 31, wherein the weight-to-volume ratio of the total salt content is within a range of about 180% to 300%.